

ABSTRACT OF THE DISCLOSURE

A scanning exposure apparatus includes an illumination optical system for illuminating a pattern on a mask using arc-shaped illumination light, a projection optical system for projecting the pattern on the mask illuminated by the illumination optical system onto a plate, a mask stage for scanning the mask, a plate stage for scanning the plate, the scanning exposure apparatus scanning the mask stage and plate stage synchronously relative to the projection optical system, a mask support mechanism for supporting a periphery of the mask, and a mask stage tilt mechanism for arranging the pattern in an area illuminated by the arc-shaped illumination light in an object-surface-side focal plane of the projection optical system, wherein the mask deforms due to its own weight from the peripheral support.